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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/164,392	09/30/1998	DONG-GYU KIM	33404/DBP/Y3	6608

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EXAMINER

LANEAU, RONALD

ART UNIT PAPER NUMBER

2674

DATE MAILED: 04/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/164,392

Applicant(s)

KIM, DONG-GYU

Examiner

Ronald Laneau

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13 and 16 is/are rejected.
- 7) ☒ Claim(s) 11, 12, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The finality of the action dated January 8, 1997 is withdrawn upon review of the Applicant's Appeal Brief filed on September 17, 2001. The prosecution of the case is reopened and a new action follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-8, 13, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto (6,295,043).

As per claim 1, Hashimoto teaches a method of driving a liquid crystal display having a matrix of a plurality of pixels with a common electrode and a pixel electrode, comprising the steps of:

applying a common voltage to the common electrode; and
applying a data voltage of a positive polarity and a negative polarity with respect to the common voltage alternately to groups of a plurality of pixels that are adjacently located, wherein the polarity of the data voltage applied to each of the pixels in each group is the same (see abstract and figure 2B).

As per claim 2, Hashimoto et al teach a method wherein the pixel group is comprised of three pixels as claimed (see fig. 2B).

As per claim 3, Hashimoto et al teach a method wherein the pixel group is comprised of a red pixel, a green pixel, and a blue pixel (see figs. 2B, 4).

As per claims 4 and 5, Hashimoto teaches a method wherein data voltages having the same polarity or different polarities with respect to the common voltage are applied to the adjacent pixels on the same column (see fig. 4).

As per claim 6, Hashimoto et al teach a liquid crystal display comprising a substrate, a plurality of gate lines formed on the substrate, a plurality of data lines insulated and intersecting the gate lines and transmitting a data voltage; and a plurality of pixels formed corresponding to respective regions defined by the data lines and the gate lines, wherein a common voltage is applied to the plurality of pixels, and wherein polarities of the data voltage with respect to the common voltage are inverted in a unit pixel group, and wherein the pixel group is comprised of two or more pixels (see abstract, figs. 2B, 4).

As per claim 7, Hashimoto et al teach a method wherein the pixel group is comprised of three pixels as claimed (see fig. 2B).

As per claim 8, Hashimoto et al teach a method wherein the pixel group is comprised of a red pixel, a green pixel, and a blue pixel (see figs. 2B, 4).

As per claim 16, Hashimoto et al teach a method wherein the pixel group is comprised of a column of red pixels, a column of green pixels, and a column of blue pixels (see figs. 2B, 4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshimoto (6,295,043).

As per claims 9 and 10, see rejection of claim 6. Hoshimoto et al do not expressly teach about a distance between a first data line adjacent to the pixel group and a pixel adjacent to the first data line but it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to know that one would increase the distance between the two groups of pixels because it would clearly distinguish one group of pixels from the other.

Allowable Subject Matter

6. Claims 11, 12, 14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None for the references, either singularly or in combination, teaches or even suggests:

As per claims 11 and 12, an LCD wherein the gate lines are arranged in groups of two, a first gate line and a second gate line, and a **connecting member** is formed between the first gate line and the second gate line.

As per claims 14 and 15, an LCD wherein common lines, applying the common voltage, are connected to the common electrode, the common lines comprising a first common line and a second common line, and a **connecting member** connects the first common line and a second common line.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hirakata (6,243,064), Chen (5,648,793), Chimura et al (5,654,733), Moriyama (5,790,092), Hirakata et al (5,847,687).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is 703-305-3973. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:00 PM or via email: ronald.laneau@uspto.gov.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached at 703-305-4709.

9. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

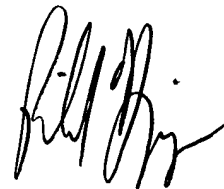
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ronald Laneau
Examiner
Art Unit 2674



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**

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March 22, 2002